Work Orde Tuesday, June 08									. 			•	Page 1
Item ID: Revision ID:	D205-634-041				Accept					_	Start		
		tart Qty: 1.00 keq'd Qty: 1.00				Cust Ite				•	Stop	· .	
Approvals:	Process Plan: QC:		_ Date: _ _ Date: _		Tooling: SPC (Y/N):		Date:			Run	Start Stop		
Sequence ID/ Work Center ID	O D	peration escription			Set Up/ Run Hours	Tool II	Tool#	Plan Code	Accept Qty	Reje Qty		Reject Number	Insp. Stamp
Draw Nbr D2580	Revision Rev D	on Nbr							1				
DC Document Control	D	OCUMENT CONTRO Memo Photocopy		efile & type la	0.00 0.00 abels per PPP D205-634	-041 СНG002 / //	'A						
110		2-Cut tubes	er program D	02580.C on CN D2580	0.00 0.00 NC Bender and Folio Ex	1/		10	- Ca) -	/2		

Work Order ID 59603

Tuesday, June 08, 2010 2:24:27 PM



Page 2

Item ID:

D205-634-041

Accept

Setup

Start

Stop



Revision ID:

Start Date:

Item Name: Replacement Skidtube

Required Date: 6/14/2010

6/8/2010

Start Qty: 1.00

Req'd Qty: 1.00

Cust Item ID:

Customer:

Tool ID

Run

Start



Reference:

Approvals:

Process Plan: _____ Date: ____

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Stop

Sequence ID/ **Work Center ID**

120

Skidtubes

Operation **Description**

QC:____

Set Up/ **Run Hours**

Tool # Plan Code

Accept Qty

Reject Qty :

Reject

Insp. Number Stamp

Skidtubes

Memo

0.00

0.00

1- Deburr ends

2- C'sink holes as per dwg without cutting fluid

3- Prepare tube for welding, remove alodine as required.

4- Scribe batch number insied aft end of tube.

NO/6/15

130

QC Quality Control QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Page 3

Insp.

Work Order ID 59603 Tuesday, June 08, 2010 2:24:27 PM Item ID: D205-634-041 Accept Setup Start **Revision ID:** Stop Item Name: Replacement Skidtube **Start Date:** 6/8/2010 Start Qty: 1.00 **Cust Item ID: Required Date: 6/14/2010** Req'd Qty: 1.00 **Customer:** Reference: Run Start Approvals: Process Plan: Date: Tooling: Date: Stop QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Tool ID Set Up/ Tool # Plan Reject Accept Reject **Work Center ID** Description Number Stamp **Run Hours** Code Qty Qty 140 0.00 Skidtubes 0.00 Memo Skidtubes BE 10/06/16 1-Weld step D2576 as per Dwg. D2580 and OSI 00-

2-Prep per QSI 005 and weld crossbolt spacers D2579 as per Dwg. D2580, QSI

For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill A/R \(\square\) Aluminum Rod \(\frac{\mathbb{M}}{1/42} \frac{42}{2} \)

3-Grind welds as per Dwg D2580 Grind flush ridge made from bending

A/R□□□ Aluminum Rod

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64", adjust stopper not to hit web.Deburr

5-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580. Deburr holes

6-Drill pilot holes for aft cap using DT 8215Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Deburr

AWM 10-06-17

Work Order ID 59603

Tuesday, June 08, 2010 2:24:27 PM



Page 4

Item ID:

D205-634-041

Accept

Setup | Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date: 6/8/2010

Start Qty: 1.00

Required Date: 6/14/2010 Req'd Qty: 1.00

Cust Item ID:

Customer:

Tool ID

Run

Accept

Qty

Start



Approvals:

Reference:

QC:

Process Plan:

Date:

Date:

Tooling: SPC (Y/N):

Date: Date:

Tool#

Plan

Code

Stop

Reject

Qty:

Insp.

Stamp

Reject

Number

Sequence ID/

Work Center ID

150

QC

Quality Control

Operation Description

QC10- Inspect visual per QSI004- ground welds

Set Up/ **Run Hours**

0.00

160

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

Memo

Pressure Wash per QSI005 4.3

0.00

27 11 10/06/28

Memo

0.00

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.

170

HandFinish Hand Finishing

Work Ord	er ID 59	603		 							<u> </u>	-
Tuesday, June 0												Page 5
Item ID: Revision ID:	D205-634-04	41		Accept				S	Setup	Start		
Item Name: Start Date: Required Date: Reference:	Replacement 9 6/8/2010 6/14/2010	Skidtube Start Qty: 1.00 Req'd Qty: 1.00			Cust Item 1 Customer:	ID:				Stop	¥	
Approvals:	Process Pla	an:	Date:	Tooling: SPC (Y/N):	- 1	ate:		I	Run	Start Stop		
Sequence ID/ Work Center II 180 Powdercoat Powder Coating	D	Operation Description White Gloss(Ref:4.3.5.1) Memo START TIM OVEN TEM FINISH TIM	e	Set Up/ Run Hours 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Rej Qty	, r	Reject Number	Insp. Stamp

0.00 => M 10/0ce/30

0.00

QC3- Inspect Part Finish

Quality Control

Memo

Work Ord Tuesday, June 0		· .					1		,		r	Page
Item ID: D205-634-041 Revision ID: Item Name: Replacement Skidtube Start Date: 6/8/2010 Start Qty: 1.00 Required Date: 6/14/2010 Req'd Qty: 1.00 Reference:		Accept					Setup	Start Stop				
					Cust Item ID: Customer:				Stop			
Approvals:	Process Pla	n:	Date:			Date:			Run	Start Stop		
Sequence ID/ Work Center II		Operation Description		Set Up/ Run Hours	Tool I	D Tool#	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp
HandFinish Hand Finishing		Sikaflex on i A/R	rts & wearplates & Gaskernsert holes before installing Sikaflex-291 MILL of the date: 1011 M	g wearplates 3 5 5 □ □ m Jelly and install on D2: 4 i80 and seal Fwd Step & . 113 5 □ □	e a drop of 594-1 plugs as	7/0(9	8		

,

Work Order ID 59603

Tuesday, June 08, 2010 2:24:27 PM



Page 7

Item ID:

D205-634-041

Accept

Setup Start



Revision ID:

Item Name:

Required Date: 6/14/2010

Replacement Skidtube

Start Date:

6/8/2010

Start Oty: 1.00

Req'd Qty: 1.00

Date: _____

Cust Item ID:

Customer:

Tool ID

Run

Accept

Qty

Start

Stop



Reference:

Approvals:

Process Plan: _____ Date:

Tooling:

Date:

Date:

Tool # Plan

Code

Stop

Insp.

Stamp

Sequence ID/ Work Center ID

210

QC

Quality Control

Operation Description

Packaging

QC5- Inspect part completeness to step on W/O

Set Up/ **Run Hours**

0.00

SPC (Y/N):

0.00

0.00

0.00

Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for

Foreign objects per QSI 024

220

Packaging

Packaging

230

Quality Control

Memo

Memo

Identify and pack for stipping as per PPPD205-634-041

Location: PPP Rev:

QC21- Final Inspection - Work Order Release

Memo

0.00

0.00

Qty

Reject

Reject

Number

MF 10-7-("

Picklist Print						Page 2
Tuesday, June 08, 2010 2:24:31 PM		IA IBIIT AIRII BARBA IIII REBE		i :		
Work Order ID: 59603			FII			
Parent Item: D205-634-041 Parent Item Name: Replacement Skidtube				ļ.		
•	D 0051 G 25			Start Date:		Required Date: 6/14/2010
	er PAR09-043 EC ve	rified by:DD EC	KJ	Start Qty:	1.00	Required Qty: 1.00
D2855 Ma	nufactured No		200 Each	88.0000 1	1	
Cup		<u>Location</u>	Loc Oty	Loc Code		
		FP6	2			1
		66613	2	0 17 17 20		11 10106/30
		ST026 50513	86	ri II		•
		50770	28			
		51539	4	i F		1
AN3-5A Pur	chased No	53791	53	917.0000		
Bolt Pur	chased No		200 Each	817.0000 2		i
		Location .	Loc Qty	Loc Code		
		ST350	817		12 h	1) 10/06/30
		105057	817			
AN960JD10L NAS1149D0332J Pur	chased No		200 Each	3,795.000 2	2	!
		Location	Loc Qty	Loc Code		E .
	•	ST348	3795			
		110985	3795		X2)	41 voloce 30
ALS7-1032-130 Pur	rchased No		200 Each	17.0000 50	50	:
		Location	Loc Oty	Loc Code		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
		ST282	17	1114723	<u> </u>	N 10/00/30
T. 1 1 00 2010 2 24 21 71		113238	17			
Tuesday, June 08, 2010 2:24:31 PM		Shop Pa	cket Print			Page 2

Picklist Print Tuesday, June 08, 2010 2:24:31 PM Work Order ID: 59603 Parent Item: D205-634-041 Parent Item Name: Replacement Skidtube Start Date: 6/8/2010 **Required Date: 6/14/2010** IPP Rev:N□02.08.28□FP was QC5 in Step 27; Added QC5 to Step 30□KJ Comments: Start Qty: 1.00 Required Oty: 1.00 IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD IPP Rev. O 06.02.28 Added paperwork IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM AN3C4A Purchased No 200 Each 1,525.000 50 50 **BOLT** Loc Qty Location Loc Code ST350 1525 114103 501 114108 14 114416 12 114523 2 M 10/06/30 x 50 114859 996 AN960C10L NAS1149C0332 Purchased No 200 Each 0.0000 50 50 M115000 washer D3566-13 Manufactured No 200 Each 16.0000 Gasket Location Loc Oty Loc Code FP 16 10/06/30 53461 16 D3566-5 200 Manufactured No Each 26.0000

Gasket

Location Loc Qty Loc Code FP015 26 57682 59158 22

A) 10 (0 6/30

Page 3 /



DESIG	#	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA							
CHEC	KED.	APPROVED		REV. D						
	M			1 OF*3						
DATE			TITLE	SCALE						
07.0	2.27		205 SKIDTUBE ASSEMBLY	NTS						
Α		96.09.16	NEW ISSUE							
В		96.12.02	AS MANUFACTURED							
С		98.08.26	REDRAWN, INCLUDED DEO 9094/90	97						
D		07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183							



QTY -041	QTY -045	Part Number	Description	
Х		D2580-041	SKIDTUBE ASSEMBLY	
	Х	D2580-045	SKIDTUBE ASSEMBLY	- CONTRACT
1	1	D2500-1-190	EXTRUSION	SHOP COPY RELOXATO
1	1	D2576-3	STEP	
20	24	D2579	CROSS BOLT SPACER	and the second second
16	16	D2594-1	PLUG	NCONTIGUE
16	16	D2594-3	O-RING	
1	1	D2596	205 WEB	WITH W
1	1	D2855	AFT CAP	WORK OF DER NO. 39403
1	1	D3564-5	WEARSHOE	NO 3940
1	1	D3564-9	WEARSHOE	10.20
1	1	D3564-11	WEARSHOE	BA104-00
1	1	D3564-13	WEARSHOE	
2	2	D3566-1	GASKET	
1	1	D3566-5	GASKET	
1	1	D3566-13	GASKET	
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT	
50	50	AN3C4A	BOLT	
2	2	AN3-5A	BOLT	
50	50	AN960C10L	WASHER	
2	2	AN960JD10L	WASHER	•

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- ALL DIMENSIONS ARE IN INCHES
- INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING, ENSURE HOLES LINE-UP.
- BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:

SEE NOTES ON

PAGE 2 FOR D2580-041 AND

PAGE 3 FOR D2580-045

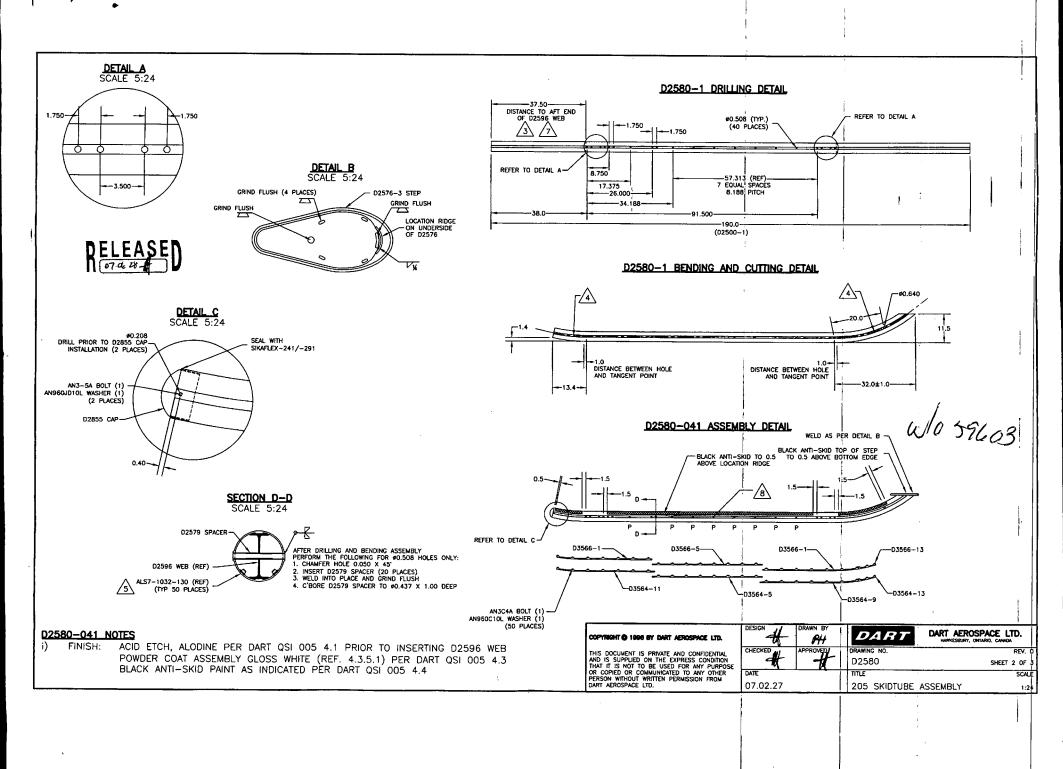
INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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Dart Aerospace Ltd W/O: **WORK ORDER CHANGES** Approval Chief Eng / Prod Mgr DATE STEP **Approval PROCEDURE CHANGE** By Date Qtv QC Inspector Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ___ Date: ___ Disposition: _____ QA: N/C Closed: ____ Date: ____ Resolution: WORK ORDER NON-CONFORMANCE (NCR) NCR: **Corrective Action** Section B **Description of NC** Verification **Approval STEP** DATE Approval **Action Description** Sign & Initial Section A Section C Chief Eng QC Inspector Chief Eng Chief Eng Date

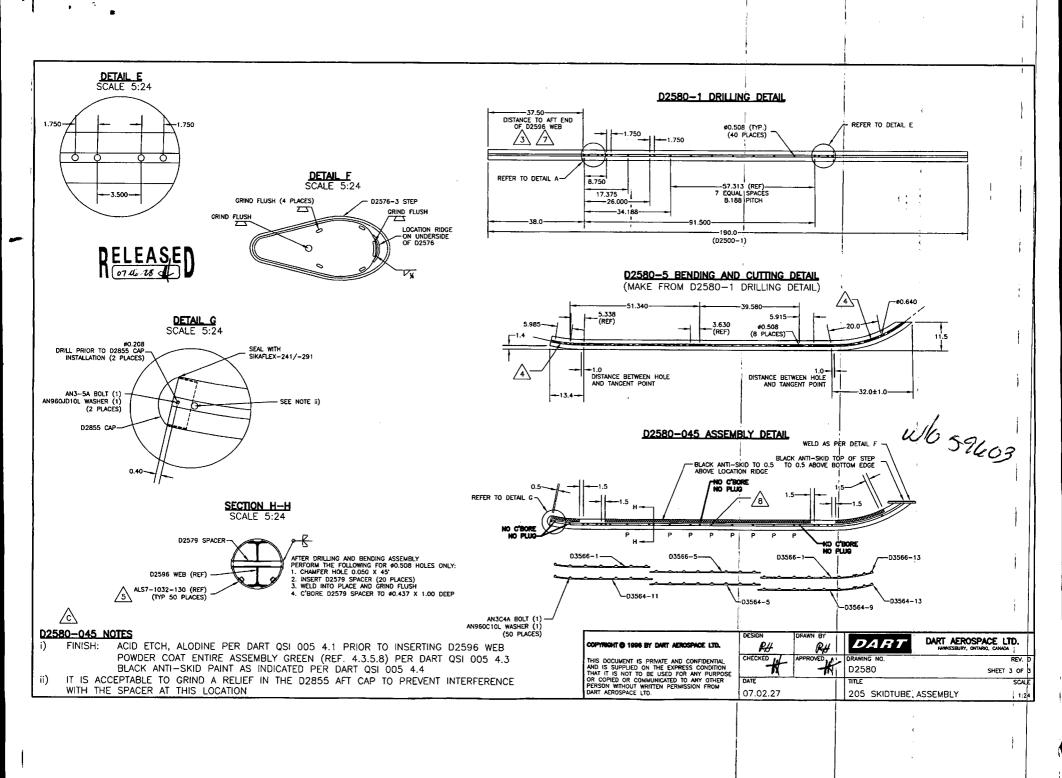
NOTE: Date & initial all entries



Dart Aerospace Ltd

W/O:			W	ORK ORDER	CHANGE	S					
DATE	STEP	PRO	CEDURE CHA			Ву	,	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No:		PAR #:								_ Date: _	
	R		olution: QA: N/C Closed:				sed:		Date:		
NCR:		V	VORK ORD	ER NON-CO	NFORMAI	VCE (N	CR)				
DATE	STEP	Description of NC Section A	Initial Chief Eng	Corrective Action Des	scription	Sig	ın & ate	Verifica Section		Approval Chief Eng	Approval QC Inspector
	· · · · · · · · · · · · · · · · · · ·										
NOTE: D								,			

NOTE: Date & initial all entries



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DATE STEP PROCEDURE CHANGE By Date Qty Chief Eng / Prod Mgr QC Inspect		rospace L	td							47
PROCEDURE CHANGE By Date Qty Chief Eng / Prod Mgr QC Inspec	W/O:			WC	RK ORDER CHANGE	S				
	DATE	STEP	PR	OCEDURE CHAI	NGE	Ву	Date	Qty	Chief Eng /	Approva QC Inspect
	58'									
Part No:	,									
Part No:										
Part No: PAR #: Fault Category: NCR: Yes No DQA: Date:										
	Part No) :	PAR #:	Fault Cate	gory:	NCR: Yes	No DQA:		_ Date: _	· ·
Resolution: Disposition: QA: N/C Closed: Date:		Res	olution:	Disposition	1:	QA: N/C Cld	sed:		Date: _	
NCR: WORK ORDER NON-CONFORMANCE (NCR)	NCR:			WORK ORDE	ER NON-CONFORMAN	ICE (NCR)			
DATE STEP Description of NC Corrective Action Section B Verification Approval Approv	DATE	STED	Description of NC				Verifica	tion	Approval	Approva
Initial Action Department Cian 9	DATE	SIEP								QC Inspect
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NOTE: Date & initial all entries

NO. 232

AWS D17.1.2001 QUALIFICATION TEST RECORD

Name: Baclay Elliott Job number: 59105	
Job number: 59105	
Part number: <u>D205-634-041</u>	
Description: 805 skid tube	
Welding Process: Tig[Mig[]	
Base materiel: Aluminian	
Current: AC[\(\sum \) DC[]	

TEST REQUIREMENTS AND RESULTS

Visual: Penetration:	pass[/ fail[] pass[/ fail[]
UNACCEPTABLE	
Cracks: Undercut: Pin holes: Overlap (cold lap) Porosity (surface): Coloration:	pass[/] fail[] pass[/] fail[] pass[/] fail[] pass[/] fail[] pass[/] fail[]
Qualifier las Dun. Welder Booley Welxor	Date of Test Coupon 10.06.01 Date of Test Coupon 10.06.01
I	

The above named individual is qualified in accordance with AWS D17 1 2001 to weld